

CONTROLLED LEAKAGE CMOS DECOUPLING CAPACITOR FOR APPLICATION  
SPECIFIC INTEGRATED CIRCUIT LIBRARIES

Abstract of the Disclosure

5           A decoupling capacitor includes a fixed resistance in  
series with the capacitor, the resistance formed by contacts  
connecting a polysilicon layer to metal and a diffusion  
layer to metal; the contacts being of location and quantity  
sufficient for limiting defect current while allowing the  
10 capacitor to function at high frequency. N pairs of  
contacts in at least two sets of contacts are separated by a  
distance K sufficient to achieve a leakage limiting  
resistance of R and a bandwidth limiting resistance of  $R/2$ .